REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Office Action dated May 3, 2006 has been received and its contents carefully reviewed.

By this Response, claim 19 has been amended. No new matter has been added. Claims 19-21 are pending. Reconsideration and withdrawal of the rejections in view of the above amendments and the following remarks are respectfully requested.

In the Office Action, claims 19 and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,894,136, issued to Wook (hereafter "Wook") in view of U.S. Patent No. 6,043,511, issued to Kim (hereafter "Kim") and U.S. Patent No. 5,844,255, issued to Suzuki et al. (hereafter "Suzuki"). Applicants respectfully traverse the rejection because neither Wook, Kim nor Suzuki, analyzed alone or in any combination, teaches or suggests the combined features recited in the claims of the present application. In particular, Wook, Kim and Suzuki fail to teach an array substrate for an active matrix type liquid crystal display device "wherein said storage capacitor further includes a short-preventing part disposed between said pixel electrode and said gate line, wherein the short-preventing part has a stepped portion that overlaps a stepped end portion of the gate line", as recited in independent claim 19 of the present application.

The Office Action concedes that Wook fails to disclose "the data line is substantially the same as an end portion of the data line" and "the device wherein the pixel electrode extends over a portion of the gate line so as to form a storage capacitor comprised of the pixel electrode, the gate line, and the first insulating layer, wherein the storage capacitor further includes a short-preventing part disposed between the pixel electrode and the gate line that includes a semiconductor layer and the passivation layer." To remedy the deficient teachings of Wook, the Office Action relies upon Kim and Suzuki. Based upon the teachings of Kim, the Office Action concludes that it would have been obvious to one of ordinary skill in the art to modify the device of Wook to obtain a device having the combined features recited in the claims of the present application. Applicants disagree and submit Kim and Suzuki fail to remedy the deficient teachings of Wook.

Kim discloses "the gate insulating layer 20, the amorphous silicon layer 30 and the passivation layer 60 cover the gate line 11 of two layer, and a pixel electrode 100 overlaps thereon" (col. 6, lines 23-26). However, Applicants submit Kim fails to at least teach, for example in FIG. 10, "the short-preventing part has a stepped portion that overlaps a stepped end portion of the gate line", as recited in independent claim 19.

Suzuki discloses a structure of a LCD device in which the "i-type semiconductor layer (AS) and the gate insulating film (GI) are patterned along and in the same shape as the video signal lines (DL) between the video signal lines (DL) and the first transparent glass substrate (SUB1)" (see, Abstract). However, Applicants respectfully submit Suzuki fails to teach an array substrate "wherein said pixel electrode extends over a portion of said gate line so as to form a storage capacitor comprised of said pixel electrode, said gate line, and said first insulating layer, wherein said storage capacitor further includes a short-preventing part disposed between said pixel electrode and said gate line, wherein the short-preventing part has a stepped portion that overlaps a stepped end portion of the gate line", as recited in independent claim 19.

Because neither Kim nor Suzuki teach at least the above features of independent claim 19, even if the device of Wook were modified by the teachings of Kim and Suzuki, which Applicants do not concede there is proper motivation to do, the resulting device would fail to teach all the combined features recited in the claims of the present application. Specifically, the resulting combination of Wook, Kim and Suzuki would fail to teach an array substrate for an active matrix type liquid crystal display device "wherein said storage capacitor further includes a short-preventing part disposed between said pixel electrode and said gate line, wherein the short-preventing part has a stepped portion that overlaps a stepped end portion of the gate line", as recited in independent claim 19 of the present application. As such, claim 19 and its dependent claim 20 are allowable over any combination of Wook, Kim and Suzuki. Reconsideration and withdrawal of the rejection of claims 19 and 20 are respectfully requested.

In the Office Action, claim 21 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wook, Kim and Suzuki in view of U.S. Patent No. 5,926,235, issued to Han et al. (hereafter "Han"). Applicants respectfully traverse the rejection because neither Wook, Kim, Suzuki nor Han, analyzed alone or in any combination, teaches or suggests the combined features recited in the claims of the present application. In particular, Wook, Kim, Suzuki and Han fail to teach an array substrate for an active matrix type liquid crystal display (LCD)

"wherein said pixel electrode extends over a portion of said gate line so as to form a storage capacitor comprised of said pixel electrode, said gate line, and said first insulating layer, wherein said storage capacitor further includes a short-preventing part disposed between said pixel electrode and said gate line, wherein the short-preventing part has a stepped portion that overlaps a stepped end portion of the gate line", as recited in independent claim 19 from which claim 21 depends.

The Office Action states that Wook, Suzuki and Kim fail to disclose "the short-preventing part further includes an ohmic contact layer, and a conducting material between the semiconductor layer and the passivation layer." (see, page 4). Applicants have discussed above the deficient teachings of Wook, Kim and Suzuki, and respectfully submit Han fails to remedy the deficient teachings of these references.

Han discloses an active matrix LCD that includes a storage capacitor 130 that overlaps a part of the gate bus line (FIG. 5C) (col. 4, lines 20-22). And, "a pixel electrode 104 is formed to be electrically connected with a part of the storage capacitor 130 and a part of the drain electrode 106 (FIG. 5I)" (col. 5, lines 13-15). However, Applicants submit Han fails to teach "said pixel electrode extends over a portion of said gate line so as to form a storage capacitor comprised of said pixel electrode, said gate line, and said first insulating layer, wherein said storage capacitor further includes a short -preventing part disposed between said pixel electrode and said gate line, wherein the short-preventing part has a stepped portion that overlaps a stepped portion of the gate line", as recited in independent claim 19 of the present application.

Because Han fails to teach at least the above features of independent claim 19, Han fails to remedy the deficient teachings of Wook and no combination of Wook, Kim, Suzuki and Han would provide a device having the combined features recited in independent claim 19 of the present application. Accordingly, claim 19 and its dependent claim 21 are allowable over any combination of Wook, Kim, Suzuki and Han. Reconsideration and withdrawal of the rejection are respectfully requested.

Applicants believe the foregoing amendments and remarks place the application in condition for allowance and early, favorable action is respectfully solicited. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 496-7500 to discuss the steps necessary for placing the

application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911. A duplicate copy of this sheet is enclosed.

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Respectfully submitted,

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